COPY

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February 9, 2016

VIA EMAIL: DavidALudder@enviro-lawyer.com
DAVID LUDDER
ATTORNEY AT LAW
9150 MCDOUGAL COURT
TALLAHASSEE FL 32312-1208

RE: Notice of Violation and Intent to File Suit under the Clean Water Act

Dear Mr. Ludder:

I am writing to you as the Attorney for the City of Reform AL. In response to your letter dated January 14, 2016, please take note of the following:

1. The City is now in compliance with all previous orders;
2. To satisfy the conditions of the order(s), the City constructed an entirely new wastewater treatment plant funded through the State Revolving Fund.
3. The City, by and through its engineering firm, submitted the appropriate schedule and completion estimates;
4. The City actually finished 6 months ahead of the schedule completion date.

I have attached the engineering firm's letter for your review. If you have any questions please let me know. I will expect an acknowledgment from you that this matter is concluded.

Sincerely,

/s/ Timothy B. McCool
TIMOTHY B. MCCOOL (MCC096)

cc:

Mayor Bennie Harton
City of Reform
PO Box
Reform AL 35481

CFM Group
2135 University Blvd
Suite A
Tuscaloosa AL 35401

Hon. Gina McCarthy, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Hon. Heather McTeer Toney Regional Administrator
U.S. Environmental Protection Agency-Region 4
Sam Nunn Atlanta federal Center
61 Forsyth Street, SW
Atlanta GA 30303-3104

Hon Lance LeFleur, Director
Alabama Dept of Environmental Management
P.O. Box 301463
Montgomery, Alabama 36130-1463

CFM Group

**Civil and Environmental Engineers,
Scientists, Planners, and Surveyors**

September 17, 2012

Ms Daphne Smart
ADEM Water Division
P.O. Box 301463
Montgomery, AL 36130-1463

**RE: City of Reform Civil Action No. CV-2009-900044 Implementation Schedule
NPDES Permit No. AL0020915
City of Reform, Pickens County, Alabama**

Dear Ms. Smart:

On September 4, 2012 during our conference call with Mr. Robert Tambling with the Alabama Attorney General's Office, we discussed implementation issues regarding the above referenced action (hereafter "the Action"). As you are aware, an Order on Settlement Agreement (hereafter "Order") was entered into between the Attorney General and the City of Reform (hereafter "the City) on November 8, 2010. This Order set about certain remedies to the Action to ensure NPDES Permit compliance.

During this conference call, the City was asked to provide a final implementation deadline for meeting the requirements of the Order. As we discussed, the Order itself did not give specific milestones, rather it relied on schedules set forth in an engineering report from Sentell Engineering, Inc. (hereafter "the Engineer") dated December 3, 2010. Subsequent progress report filings by the Engineer noted construction delays and implementation problems and provided extended completion schedules with no final compliance date.

As we discussed during the conference call, in July the City asked CFM Group, LLC (hereafter "CFM") to evaluate the wastewater treatment system and implemented upgrades to determine how best to proceed with achieving compliance. While this effort is on-going, we have reached some tentative conclusions that will be validated in the coming month. We have also commenced implementing new remedies aimed at making the existing system compliant.

CFM Findings to Date

In 2010 the City commenced a project to re-configuring the City's existing 0.5 MMgal/day extended aeration complete-mix activated sludge (hereafter "CMAS") plant into a "three-cell" lagoon system. In this configuration a new surge pond and headworks would be added on property adjacent to and on the south side of the treatment plant. Flow from this pond would then be directed to the existing 0.5 MMgal extended aeration basin which would now operate as a second polishing pond. The existing clarifier was to serve as the final pond in the system. Small surface diffusing aerators were placed in the surge pond and the old extended aeration basin. Based on the drawings provided by the Engineer, the sizes of each unit are given below:

2135 University Blvd. Suite A | **Tuscaloosa, AL 35401** | **205.752.4037** | FX 205.752.4063
www.cfm-grp.com

Unit	Volume, gal	Surface Area, Ac	HRT, days
Surge Pond (New Unit)	3,797,700*	1.85	7.6
Pond 2 (CMAS Reactor)	450,000**	0.23	0.9
Pond 3 (Clarifier)	65,500	0.02	0.13

*Based on construction drawings – as built drawings were not provided
**Volume was reduced from 500,000 gal to improve flow through system

Three small "GEN-AER" fine bubble diffuser systems were placed in service with two 4-hp units in the surge pond and one 2 ½-hp unit in pond 2. As we understand the re-configuration, the former return activated sludge (hereafter "RAS") lines were redirected back to the front of the surge pond.

We have evaluated the system and formulated the following preliminary conclusions:

1. An analysis of the system curve for the influent piping shows that the influent pumps were sized such that in simplex mode between 525 and 600 gpm of flow is delivered to the surge pond. In duplex mode, the flow will range from 875 to about 975 gpm. However, based on current data, the pipe leaving the surge pond limits the flow from the pond. With the surge pond completely full to the top of the berm, the pipe flow is calculated to be 600 gpm. Hence, with both pumps running, as they would during a storm event, the pond will fill to capacity and could potentially overflow.
2. We understand that sludge from cleaning out the CMAS reactor was put into the surge pond. This, we believe, is now a source of nutrients being re-released into the water.
3. We have evaluated performance data provided by the OEM of the fine bubble diffusers. The diffusers are capable of providing 32.6 lbs/hr of oxygen into the surge basin and about 9 lbs/hr into Pond 2. The total oxygen demand of the influent wastewater, at the design flow of 0.5 MMgal/day is 63.3 lbs/hr. Additionally the OEM diffusers do not provide enough mixing energy to keep biological solids, especially nitrifying bacteria, suspended in the water column. Accordingly, the surge basin and Pond 2 are currently not capable of meeting the strict permit limit on ammonia.
4. Algae growth can be expected to occur in aerated basins without complete mixing capability and having an HRT in excess of two days[1]. Coupled with mineralized nitrogen believed to be evolved from sludge re-directed into the pond, predominately single-species filamentous and unicellular cyanobacteria proliferate creating excessive turbidity and unsettleable solids in the effluent.
5. The system no longer has the ability to properly return sludge or remove sludge from the system. The RAS pump was removed from the project due to budget constraints. The City was able to secure a pump for this purpose; however it provides much head and flow to maintain operational control.
6. The strap-on flow meter at the UV plant was replaced with a sonic flow meter in the effluent Parshall Flume just prior to disinfection. However, because of downstream hydraulic constraints, the throat of the flume is flooded.

In summary: the plant no longer has the capability of operating as a CMAS system; the ponds are too small to operate as a series of facultative lagoons and too large to prevent excessive

[1] Rich, L.G., (2008). Control of Algae, Technical Note Number 3. Department of Environmental Engineering and Science, Clemson University.

algae growth; the system does not have the capability or capacity to nitrify; and it is hydraulically impaired.

As you can surmise, this situation presents an interesting set of challenges to bring it into full compliance. The City would like to get some benefit from the new infrastructure if and wherever possible, but is nonetheless dedicated to meeting their permit limits. To this end, I have started looking at different available options. None are currently without detractors, and the ultimate remedy will need to be based on economic considerations. As such, I cannot at this time with any confidence say what is the best option without further evaluation. However, here are the options that are being considered in the form of a preliminary alternatives evaluation. Other alternatives may become evident as we progress with things.

Alternative	Primary Treatment	Secondary Treatment	Tertiary Treatment	Challenges
No Change	Coarse screening	Aerated ponds	None	System is not capable of meeting ammonia limits; seasonal variations will create inconsistent operation; cannot handle high inflow rates without overtopping
Reactivate CMAS	Coarse screening	Extended aeration	Aerated Pond	Will be necessary pump effluent from the clarifier into the surge pond. Will not allow for surge capacity. Could divide the pond into two basins and use one for surge capacity and one for effluent polishing.
Aerated Lagoon	Coarse screening	Aerated Lagoon	Constructed wetland or rapid sand filter	No room for constructed wetland without taking in part of surge pond. Would have to pump water three times through system to work.
Reactivate CMAS	Coarse screening	Extended aeration	Constructed wetland	Would divide surge basin in half and use part for surge storage and part for a constructed wetland for effluent polishing. Still would have to pump water three times through system to work.

In the interest of achieving compliance as quickly as possible, the City is currently undertaking the following activities:

1. Solicited help from the West Alabama Regional Commission (hereafter "WARC" in Tuscaloosa to secure any necessary funding for resolving the system problems.
2. Passed a resolution to submit a grant request to ADECA for sewer system rehabilitation during the next funding cycle (Spring 2013).
3. Re-installed one of the old original 25-hp aerators in Pond 2.
4. Installed a line from the RAS pump pit to the front of Pond 2 to be able to return and waste sludge.
5. Investigate the best way to split the influent flow at the new headworks such that new surges are directed to the surge pond but normal flow goes directly to Pond 2.
6. Complete nutrient surveys in the surge pond to determine if the sludge placed in the unit is a source of mineralized nitrogen.

The reasoning behind these activities is to operate the plant in CMAS mode but run with long sludge ages and high aeration rates to achieve the necessary level of nitrification in the CMAS unit. Water from the surge basin will be pumped through the system at a low rate so as not to overload the CMAS. I expect these items to be fully completed by the end of this year.

I have attached the summary of funding sources identified by WARC. The City has been advised by WARC not to stipulate any funding source at this time without first meeting with ADECA to determine if they will support additional funding for more work on this system. We believe we will be able to follow through with this recommendation by the end of October 2012. In the meantime, we believe that we will have also generated sufficient data by the end of October to complete the alternatives evaluation in support of a funding request from the agencies identified. Barring any unforeseen circumstances, this would put the City in a position to make a funding decision and application by the end of the first quarter 2013 (the normal application date). Depending upon the agency selected, we would expect to have the funding secured by the end of 2013 with construction occurring the following year.

If this scenario holds, we would expect to have the project completed, operational, and in compliance no later than the end of 2015. Therefore we would propose a compliance date of December 31, 2015.

If you need any additional information, or justification of the timeline, please do not hesitate to call me at (205) 752-4037. With kindest regards, I am

Sincerely,

CFM Group, LLC

Jonathan Bonner, P.E.
Engineering Services Manager

cc: Hon. Frank Criswell, Mayor City of Reform
Mr. Tim McCool, Esq.

Potential Sources of Funding for Reform's WWTP Upgrades

State Revolving Fund (SRF):

Stan Shirley
334/271-7806
sls@adem.state.al.us

Application timeline (about 9 months):

- Engineer fills out preapplication (engineer has to do this)
- Preapplication is due by January 1, 2013
- Engineer also has to submit PER with the preapplication
- Also send them the town's 3 most recent audits
- Suggests starting on all of this in October/November
- Between January and May engineer prepares the environmental document and full application - due by May 1, 2013

Spoke with Stan Shirley at ADEM re SRF. There should be no problems with Reform applying for a loan with them unless there is a problem with repayment ability. The remedy for this would probably be for Reform to increase their rates to their customers to repay SRF. The fact that Reform is under a consent order would help them justify an SRF loan.

Terms/rates – 20 years, less than 3% interest (2.75% this year)

No grant $$ through SRF

SRF loan can be used as match against a federal grant

Stan wants engineer to fill out a survey – or Reform can get an ADEM staffer to do it at no cost to the town – for EPA's Clean Water Needs Survey. This survey is a "wish list" of what the town would like to see. EPA requires a survey every four years.

[From previous notes unrelated to Reform project: ADEM has two revolving loan funds, one for water (DWSRF) and one for sewer (CWSRF). The SRF rate is fixed at 1.5%-2% less than the municipal bond rate with terms up to 20 years. The minimum loan for water is $100,000 and the maximum is $10,000,000. Comparable amounts for sewer projects unknown. In years past the projects that had the best chance of getting approved for the SRF fund were those that addressed a health threat.]

AMFund:

Louis Cardinal
334/270-8555
lcardinal@thorntonfarish.com
AMFund.com

Application timeline (can apply any time):

- Must schedule a meeting with AMFund staff
- Fill out application
- Submit 3 most recent audits
- Choose terms and fixed or variable rate
- Application process takes about 4-6 weeks

Town does not go to the bond market for this loan. AMFund is cheaper than the bond market.

Just made a loan to the town of Trinity for $1.4 million for 18 years with a fixed 3.6% interest rate.

Rate quote is good for 45 days.

Fee structure is between $20,000 and $30,000.

Prefer 15 year loan with fixed rate. Can go to 20 years.

Suggested town could go to a local bank to compare lending rates.

Town will pay a higher interest rate than SRF, but there is a timeline they have to follow with SRF and a lot more paperwork.

With AMFund, the town – as the owner of the WWTP - makes a general obligation pledge.

AMFund loan can be used as match against a federal grant.

There is no cost to submit an application and it does not obligate the applicant. The minimum loan is between $150,000-$200,000. The maximum loan is based on the municipality's legal debt limit.

USDA Rural Development:

Robert Macon
553-1733 ext.5
robert.macon@al.usda.gov

Application timeline:

- Apply any time (application packet is 45 pages long)
- SF 424, 424c, 424d
- Population (1,702) and median household income ($15,052)
- Operating budget
- Preliminary engineering report
- Engineer's environmental report
- 3 most recent audits
- Incorporation papers
- Debt instruments
- Evidence that they cannot obtain financing from other sources at rates and terms they can afford and/or their own resources
- Length of application process depends on how long it takes town to meet all criteria – approximately 5 months minimum

Loans are calculated on similar systems' rates, median household income, financial status of the system, and outstanding indebtedness

Applicant contributions to the project help with getting approved

Reform meets eligibility criteria: fewer than 5,500 population, WWTP upgrade ok

Maximum term is 40 years or useful life of facility

May be eligible for grant. Depending on number of factors, they could be eligible for up to 45%-75% of eligible project costs.

Appalachian Regional Commission (ARC):

Bonnie Durham
256/845-3472
bdurham@wavemasters.com

Application timeline:

- Preapplication due by August 31, 2013 – 2 page narrative, SF 424, project site map
- If approved at state level, notification of invitation for full application November 2013
- Full application due December 2013
- Approval/start project May 2014; grant period 12 months or get extension to 18 months
- FY 2013 Pickens is an ARC Distressed County – 80/20 match
- Must have a basic agency to administer ARC grant; USDA Rural Development or possibly TVA
- Can be used to match SRF, AMFund or USDA loan

Possible alternative timeline (need ADECA Director Jim Byard's advance approval):

- Submit full application now (skip preapplication)
- Follow his directions for amount of request and submission to ARC